

WHAT IS CLAIMED IS:

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1. An optical device comprising:

a light emission unit having an emission layer emitting a light beam along an optical axis;

10 a light reflection unit reflecting the light beam, emitted by the light emission unit, to a predetermined direction; and

a substrate having photodetecting elements disposed thereon, the photodetecting elements detecting a reflected light beam from a storage medium,

15 wherein the emission layer of the light emission unit is slanted to a central axis of the substrate, and the light emission unit and the light reflection unit are disposed on the substrate such that one of a change of a distribution of intensity of the reflected light beam from the light reflection unit and a change of a direction of polarization of the reflected light beam, caused
20 by the slanted emission layer, is corrected.

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2. The optical device according to claim 1, wherein the reflected light beam from the light reflection unit has one of a first corrected direction of polarization that is perpendicular to a tangential direction of the storage medium and a second corrected direction of polarization that is parallel to the
30 tangential direction of the storage medium.

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3. The optical device according to claim 1, wherein a plurality of pairs of the light emission unit and the light reflection unit are disposed on the substrate.

4. The optical device according to claim 3, wherein the light emission unit of at least one of the plurality of pairs has the optical axis of the emitted light beam which is different from the optical axes of the emitted light beams from the light emission units of the other pairs.

5. The optical device according to claim 3, wherein the light emission unit of at least one of the plurality of pairs has a direction of the slanted emission layer which is different from a direction of the slanted emission layers of the light emission units of the other pairs.

6. The optical device according to claim 3, wherein the reflected light beams from the light reflection units of at least two of the plurality of pairs have respective corrected directions of polarization which are perpendicular to each other.

7. The optical device according to claim 3, wherein the light emission units of at least two of the plurality of pairs are provided to have different wavelengths of emission light.

8. An optical information recording apparatus in which a light beam is emitted to a storage medium and information is recorded onto or reproduced from the storage medium, comprising:

a light emission unit having an emission layer emitting the light beam;

a light reflection unit reflecting the light beam, emitted by the light emission unit, to a predetermined direction; and

a substrate having photodetecting elements disposed thereon, the photodetecting elements detecting a reflected light beam from the storage medium,

wherein the emission layer of the light emission unit is slanted to a central axis of the substrate, and the light emission unit and the light reflection unit are disposed on the substrate such that one of a change of a distribution of intensity of the reflected light beam from the light reflection unit and a change of a direction of polarization of the reflected light beam, caused by the slanted emission layer, is corrected.

9. The optical information recording apparatus according to claim 8, wherein the reflected light beam from the light reflection unit has one of a first corrected direction of polarization that is perpendicular to a tangential direction of the storage medium and a second corrected direction of polarization that is parallel to the tangential direction of the storage medium.

10. The optical information recording apparatus according to claim 8, wherein a plurality of pairs of the light emission unit and the light reflection unit are disposed on the substrate.

11. The optical information recording apparatus according to claim 10, wherein the light emission unit of at least one of

the plurality of pairs has the optical axis of the emitted light beam which is different from the optical axes of the emitted light beams from the light emission units of the other pairs.

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12. The optical information recording apparatus according to claim 10, wherein the light emission unit of at least one of the plurality of pairs has a direction of the slanted emission layer which is different from a direction of the slanted emission layers of the light emission units of the other pairs.

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13. The optical information recording apparatus according to claim 10, wherein the reflected light beams from the light reflection units of at least two of the plurality of pairs have respective corrected directions of polarization which are perpendicular to each other.

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14. The optical information recording apparatus according to claim 10, wherein the light emission units of at least two of the plurality of pairs are provided to have different wavelengths of emission light.

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